RAW SEQUENCE LISTING

DATE: 07/05/2001

PATENT APPLICATION: US/09/647,965

TIME: 16:22:13

```
3 <110> APPLICANT: Hiscott, John
             Lin, Rongtuan
      6 <120> TITLE OF INVENTION: HIGHLY ACTIVE FORMS OF INTERFERON
              REGULATORY FACTOR PROTEINS
      9 <130> FILE REFERENCE: A33606-PCT-USA 071235.0111
     11 <140> CURRENT APPLICATION NUMBER: US 09/647,965
                                                                  ENTERED
C--> 12 <141> CURRENT FILING DATE: 2001-05-24
     14 <150> PRIOR APPLICATION NUMBER: PCT/CA99/00314
     15 <151> PRIOR FILING DATE: 1999-04-07
     17 <150> PRIOR APPLICATION NUMBER: CA 2,234,588
     18 <151> PRIOR FILING DATE: 1998-04-07
     20 <160> NUMBER OF SEQ ID NOS: 11
     22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
     24 <210> SEQ ID NO: 1
     25 <211> LENGTH: 1284
     26 <212> TYPE: DNA
     27 <213> ORGANISM: Homo sapiens
     29 <220> FEATURE:
     30 <221> NAME/KEY: CDS
     31 <222> LOCATION: (1)...(1284)
     33 <400> SEQUENCE: 1
     34 atg gga acc cca aag cca cgg atc ctg ccc tgg ctg gtg tcg cag ctg
                                                                           48
     35 Met Gly Thr Pro Lys Pro Arg Ile Leu Pro Trp Leu Val Ser Gln Leu
                                             10
     38 gac ctg ggg caa ctg gag ggc gtg gcc tgg gtg aac aag agc cgc acg
                                                                           96
     39 Asp Leu Gly Gln Leu Glu Gly Val Ala Trp Val Asn Lys Ser Arg Thr
                     20
                                         25
     42 cgc ttc cgc atc cct tgg aag cac ggc cta cgg cag gat gca cag cag
                                                                          144
     43 Arg Phe Arg Ile Pro Trp Lys His Gly Leu Arg Gln Asp Ala Gln Gln
     46 gag gat ttc gga atc ttc cag gcc tgg gcc gag gcc act ggt gca tat
                                                                          192
     47 Glu Asp Phe Gly Ile Phe Gln Ala Trp Ala Glu Ala Thr Gly Ala Tyr
     48
            50
     50 gtt ccc ggg agg gat aag cca gac ctg cca acc tgg aag agg aat ttc
                                                                          240
     51 Val Pro Gly Arg Asp Lys Pro Asp Leu Pro Thr Trp Lys Arg Asn Phe
                             70
                                                 75
     54 cgc tct gcc ctc aac cgc aaa gaa ggg ttg cgt tta gca gag gac cgg
                                                                          288
     55 Arg Ser Ala Leu Asn Arg Lys Glu Gly Leu Arg Leu Ala Glu Asp Arg
                                             90
                         85
     58 agc aag gac cct cac gac cca cat aaa atc tac gag ttt gtg aac tca
                                                                          336
    59 Ser Lys Asp Pro His Asp Pro His Lys Ile Tyr Glu Phe Val Asn Ser
                   100
                                        105
    62 gga gtt ggg gac ttt tcc cag cca gac acc tct ccg gac acc aat ggt
                                                                          384
    63 Gly Val Gly Asp Phe Ser Gln Pro Asp Thr Ser Pro Asp Thr Asn Gly
                                   120
    66 gga ggc agt act tot gat acc cag gaa gac att ctg gat gag tta ctg
                                                                          432
    67 Gly Gly Ser Thr Ser Asp Thr Gln Glu Asp Ile Leu Asp Glu Leu Leu
```

RAW SEQUENCE LISTING DATE: 07/05/2001 PATENT APPLICATION: US/09/647,965 TIME: 16:22:13

68	130					135					140					
70 ggt		atα	ata	tta	acc		ctc	CCa	πat	ССП		CCC	cca	age	cta	480
70 gg c																100
72 145		Mec	Vul	Leu	150	110	пси	110	nsp	155	GLY	110	110	001	160	
74 gct		acc	cct	σασ		tac	cct	car	CCC		caa	апс	CCC	aσc		528
75 Ala																520
75 A16	vai	нта	PIO	165	PIO	Cys	FIO	GIII	170	Leu	AIG	261	FIO	175	пеп	
78 gac	+	000	201		tta	002	220	ata		000	tat	man.	aac		cta	576
70 gac 79 Asp								_				_				370
80	ASII	PIO	180	PIO	FILE	PIU	KSII	185	GTÀ	PIO	261	Giu	190	rio	шец	
82 aag		ata		a+a	000	aaa	722		+~~	~~~	++0	a a a		202	acc	624
83 Lys																024
84	ALG	195	ьeu	Val		GIY	200	GIU	тър	GIU	Pile	205	Val	1111	AIG	
86 ttc	+ + 2.0		aaa	aaa	022	ata		a 2 a	a a a	200	a+a		tac	CCG	aaa	672
87 Phe				-		-		_	-				-			072
88	210	ALY	GLY	Arg	GTII	215	FIIE	GIII	GIII	TIIT	220	Ser	Cys	PIO	GIU	
		000	ata	at a	~~~		~~ ~	a+a	~~~	~~~		200	ata	aat	aas	720
90 ggc 91 Gly																720
92 225		ALG	ьeu	vaı	230	ser	GIU	Val	GTÀ	235	AIG	T 11T	ьец	PIO	240	
94 tgg		at a	202	ata	-	~~	aa+	~~~	2+4		a+ a	202	~~~	200		768
		-		_		_			_		_		_			700
95 Trp 96	PIO	Val	THE	245	PIO	Asp	PIO	СТА		ser	теп	THE	ASP	255	GIY	
			+			+	~+~	-+-	250	+ ~~	a+ a	~~+	~~~		ata	016
98 gtg																816
99 Val	мес	ser			Arg	нтѕ	Val			Cys	теп	СТУ	_		Leu	
100			260					265					270			
	L CL											. ~~~		. ~~		061
															g cac	864
	a Lei	Tr	Arg				Trp	Leu				Arg	Leu			864
104	a Leu	Trp 275	Arg	Ala	Gly	Gln	Trp 280	Leu	Trp	Ala	Gln	Arg 285	Leu	Gly	y His	
104 106 tg	a Led	Trp 275 aca	Arg	Ala tgg	Gly gca	Gln gtg	Trp 280 ago	Leu gag	Trp	Ala	Gln ctc	Arg 285	Leu	Gly	y His	912
104 106 tg 107 Cy	a Led c cad s His	Trp 275 aca Thr	Arg	Ala tgg	Gly gca	Gln gtg Val	Trp 280 ago Ser	Leu gag	Trp	Ala	Gln ctc Leu	Arg 285 ccc Pro	Leu	Gly	y His	
104 106 tg 107 Cy 108	a Leu c cad s His 290	Trp 275 aca Thr	Arg tac Tyr	Ala tgg	Gly gca Ala	gtg Val	Trp 280 ago Ser	Leu gag	Trp gag	Ala ctg Leu	Gln ctc Leu 300	285 ccc Pro	Leu aac Asn	Gly ago Sei	y His ggg Gly	912
104 106 tg 107 Cy 108 110 ca	c cac s His 290 t ggg	Trp 275 aca Thi	Arg tac Tyr	Ala tgg Trp	Gly gca Ala gag	gtg Val 295 gtc	Trp 280 ago Ser	gag Glu	Trp gag Glu gac	Ala ctg Leu aag	Gln ctc Leu 300 gaa	Arg 285 ccc Pro	aac Asn ggc	Gly ago Sei	y His ggg Gly g ttt	
104 106 tg 107 Cy 108 110 ca 111 Hi	a Leuce cac s His 290 t gggs s Gly	Trp 275 aca Thi	Arg tac Tyr	Ala tgg Trp	g gca Ala gag Glu	gtg Val 295 gtc Val	Trp 280 ago Ser	gag Glu	Trp gag Glu gac	Ala ctg Leu aag	Gln ctc Leu 300 gaa Glu	Arg 285 ccc Pro	aac Asn ggc	Gly ago Sei	y His C ggg C Gly g ttt L Phe	912
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30	c cac s His 290 t ggg s Gly	Trp 275 aca Thr Cot Pro	Arg tac Tyr gat Asp	tgg Trp	g Gly g Gla hala gag Glu 310	gtg Val 295 gtc Val	Trp 280 ago Ser ccc	gag Glu aag	gag Glu gac Asp	Ala ctg Leu aag Lys 315	Gln ctc Leu 300 gaa Glu	Arg 285 ccc Pro gga Gly	aac Asn ggc Gly	ago Sei Sei Val	y His ggg Gly g ttt Phe 320	912 960
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga	c cac s His 290 t ggg s Gly 5	Trp 275 aca Thr Coty Pro	Argo Argo Asp	tgg Trp ggc Gly	g gca Ala gag Glu 310	gtg Val 295 gtc Val	Trp 280 ago Ser ccc Pro	gag Glu aag Lys	gag Glu gac Asp	aag Lys 315	g ctc Leu 300 g gaa Glu	Arg 285 ccc Pro gga Gly	Leu aac Asn ggc Gly	ago Sei Sei Val	y His ggg Gly g ttt Phe 320 a agc	912
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga 115 As	c cac s His 290 t ggg s Gly 5	Trp 275 aca Thr Coty Pro	Argo Argo Asp	tgg Trp ggc Gly ttc	gca Ala gag Glu 310 att	gtg Val 295 gtc Val	Trp 280 ago Ser ccc Pro	gag Glu aag Lys	gag Glu gac Asp	Ala ctg Leu aag Lys 315 acc	g ctc Leu 300 g gaa Glu	Arg 285 ccc Pro gga Gly	Leu aac Asn ggc Gly	ago Sei Sei Yal	y His ggg Gly g ttt Phe 320 a agc y Ser	912 960
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga 115 As	a Leu c cac s His 290 t ggg s Gly c ctg p Leu	Try 275 c acas Thr) cct y Pro	Argo Argo Asp CCC Pro	tgg Trp ggc Gly ttc Phe 325	gca Ala gag Glu 310 att	gtg Val 295 gtc Val gta Val	Trp 280 ago Ser ccc Pro	gag Glu aag Lys ctg	gag Glu gac Asp att	Ala ctg Leu aag Lys 315 acc	g ctc Leu 300 gaa Glu ttc	Arg 285 ccc Pro gga Gly acg	aac Asn ggc Gly gaa Glu	ago Ser Val	y His e ggg c Gly g ttt Phe 320 a agc y Ser	912 960 1008
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga 115 As 116	a Leuces cas His 290 t ggs Gly 5 c cts p Leuces a cgs	275 c acas Thi) g cet y Pro	Argo Argo Argo Asp CCC	tgg Trp ggc Gly ttc Phe 325	gca Ala gag Glu 310 att	gtg Val 295 gtc Val gta Val	Trp 280 ago Ser ccc Pro	gagger Gluck aagger Lys	gag Glu gac Asp att Ile 330	aag Lys 315 acc Thr	g ctc J ctc J ctc J ctc J gaa J gaa J gaa J gtg	Arg 285 ccc Pro gga Gly acg Thr	aac Asn ggc Gly gaa Glu	ago Ser Ser Val gga Gly 335	y His ggg Gly g ttt Phe 320 agc y Ser	912 960
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga 115 As 116 118 gg 119 Gl	a Leuces cas His 290 t ggs Gly 5 c cts p Leuces a cgs	275 c acas Thi) g cet y Pro	Argo Argo Argo Asp CCC Pro	tgg Trp ggc Gly ttc Phe 325 cgc	gca Ala gag Glu 310 att	gtg Val 295 gtc Val gta Val	Trp 280 ago Ser ccc Pro	gagger Glusses aagger Lys ctggr Leus tggr Trp	gaggaggaggaggaggaggaggaggaggaggaggaggag	aag Lys 315 acc Thr	g ctc J ctc J ctc J ctc J gaa J gaa J gaa J gtg	Arg 285 ccc Pro gga Gly acg Thr	aac Asn ggc Gly gaa Glu gag	ago Ser gto Val . gga . Gly . 335 . tca	y His ggg Gly g ttt Phe 320 agc y Ser	912 960 1008
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga 115 As 116 118 gg 119 Gl	a Leuce caces His 290 t gggs Gly 5 c ctgp Leuce a cgc	Trr 275 aca Thr Cot Pro Pro Gly Gly	Argo Argo Argo Asp CCC Pro	Ala tgg Trp ggc Gly ttc Phe 325 cgc Arg	Gly gca Ala Gly Glu	gtg Val 295 gtc Val gta Val	Trp 280 ago Ser ccc Pro gat Asp	gagger Gluck aagger Lys ctg tgg Trp 345	gag Glu gac Asp att Ile 330 ttc	aag Lys 315 acc Thr	g ctc J ctc J Leu 300 J gaa Glu C ttc Phe J gtg	Arg 285 ccc Pro gga Gly acg Thr	aac Asn ggc Gly gaa Glu gag Glu 350	ago Sei Sei Val gga Gly 335	y His ggg Gly g ttt Phe 320 agc y Ser 6 a tgg	912 960 1008 1056
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga 115 As 116 118 gg 119 Gl 120 cc	a Leuces Control Contr	Trr 275 aca Thr Cety Pro Gly Gly Ser Gly	Argo Argo Tyr gat Asp Pro 340 caag cag	tgg Trp ggc Gly ttc Phe 325 cgc Arg	Gly gca Ala gag Glu 310 att Ile tat tgg	gtg Val 295 gtc Val gta Val gcc Ala	Trp 280 ago Ser CCC Pro	gagger Gluck aagger Lys Leu Trp 345	gaggaggaggaggaggaggaggaggaggaggaggaggag	Alactg Leu aag Lys 315 acc Thr tgt Cys	Gln J ctc Leu 300 J gaa Glu C ttc Phe Val	Arg 285 ccc Pro gga Gly acg Thr	aac Asn ggc Gly gaa Glu gag Glu 350 aag	ago Sei Sei Yal Gly 335 tca Sei	y His ggg Gly g ttt Phe 320 agc y Ser 5 a tgg Trp	912 960 1008
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga 115 As 116 118 gg 119 Gl 120 cc 122 cc 123 Pr	a Leuces Control Contr	Trr 275 aca Thr Cety Pro Gly Gly Ser Gaca Asp	Argo Argo Argo Argo Asp Asp Pro 340 Cca Gln Gln	tgg Trp ggc Gly ttc Phe 325 cgc Arg	Gly gca Ala gag Glu 310 att Ile tat tgg	gtg Val 295 gtc Val gta Val gcc Ala	Trp 280 ago Ser Ccc Pro	gagger Gluck aagger Lys Leu tygger Trp 345 agger Arg	gaggaggaggaggaggaggaggaggaggaggaggaggag	Alactg Leu aag Lys 315 acc Thr tgt Cys	Gln J ctc Leu 300 J gaa Glu C ttc Phe Val	Arg 285 ccc Pro gga Gly acg Thr ggg Gly	aac Asn ggc Gly gaa Glu gag Glu 350 aag	ago Sei Sei Yal Gly 335 tca Sei	y His ggg Gly g ttt Phe 320 agc y Ser 5 a tgg Trp	912 960 1008 1056
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga 115 As 116 118 gg 119 Gl 120 cc 122 cc 123 Pr 124	a Let c cac s His 290 t ggg s Gly 5 c ctg p Let a cgc y Arg	Trr 275 aca Thr Cety Pro Gly Gly Cetca Ser Jaca Asp 355	Argo Argo Argo Argo Argo Asp Asp Pro 340 Cca Gln	tgg Trp ggc Gly ttc Phe 325 cgc Arg	Gly gca Ala gag Glu 310 att Ile tat Tyr	gtg Val 295 gtc Val gta Val gcc Ala	Trp 280 ago Ser Ccc Pro	gag Glu aag Lys Leu tgg Trp 345	gag Glu gac Asp att Ile 330 ttc Phe	aag Lys 315 acc Thr tgt Cys	g ctc Leu 300 gaa Glu ttc Phe yal val	Arg 285 ccc Pro gga Gly acg Thr ggg Gly gtc Val 365	aac Asn ggc Gly gaa Glu gag Glu 350 aag	gto gto yal gga Gly 335 tca Ser gtt	y His ggg Gly g ttt Phe 320 agc y Ser a tgg Trp	912 960 1008 1056 1104
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga 115 As 116 118 gg 119 Gl 120 cc 123 Pr 124 cc	a Leuces Caces Hiss 290 t gggs Gly 5 c ctc p Leuces A cgc Glr Caces Cace	Trr 275 aca 5 Thr 9 Cet 7 Pro 9 Gly 6 tca 1 Gac 1 Ser 355 1 tgc	Argo Argo Argo Argo Argo Asp Asp Asp Argo Argo Argo Argo Argo Argo Argo Argo	tgg Trp ggc Gly ttc Phe 325 cgc Arg	Gly gca Ala gag Glu 310 att Ile tat Tyr tgg	gtg Val 295 gtc Val gta Val gcc Ala acc	Tre 280 ago Ser CCC Pro Gat Asp Ctc Leu aag 145 360 gta	gag Glu aag Lys ctg Leu tgg 345 agg	gag Glu gac Asp att 1le 330 ttc Phe ctc Leu	aag Lys 315 acc Thr tgt Cys gtg Val	Gln Gln Gln Gln Gln Gln Gln Gln	Arg 285 ccc Pro gga Gly acg Thr ggg Gly gtc Val 365 gta	aac Asn ggc Gly gaa Glu 350 aag Lys	ago Serval gga Gly 335 tca Ser gtt	His ggg Gly ttt Phe 320 agc Ser Trp gtg Val	912 960 1008 1056
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga 115 As 116 118 gg 119 Gl 120 cc 123 Pr 124 cc 127 Pr	a Letter care care care care care care care ca	Try 275 26 aca 36 Thi 37 Cct 47 Pro 48 Gly 48 Cct 48 Gac 48 Asp 48 Ser 48 Cys	Argo Argo Argo Argo Argo Asp Asp Asp Argo Argo Argo Argo Argo Argo Argo Argo	tgg Trp ggc Gly ttc Phe 325 cgc Arg	Gly gca Ala gag Glu 310 att Ile tat Tyr tgg	gtg Val 295 gtc Val gta Val gcc Ala acc Thr	Trp 280 agc Ser ccc Pro gat Asp Lys 360 gta Val	gag Glu aag Lys ctg Leu tgg 345 agg	gag Glu gac Asp att 1le 330 ttc Phe ctc Leu	aag Lys 315 acc Thr tgt Cys gtg Val	Gln J ctc J	Arg 285 ccc Pro gga Gly acg Thr ggg Gly gtc Val 365 gta Val	aac Asn ggc Gly gaa Glu 350 aag Lys	ago Serval gga Gly 335 tca Ser gtt	His ggg Gly ttt Phe 320 agc Ser Trp gtg Val	912 960 1008 1056 1104
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga 115 As 116 118 gg 119 Gl 120 cc 123 Pr 124 126 cc 127 Pr 128	a Let c cac c cac c c c cac c c c c c c c c c c c c c c c c c c c	Try 275 aca 5 Thi 9 Cct 7 Pro 8 Gly 8 Gly 9 Ser 9 Asp 355 9 tgc	Argo Argo Argo Argo Argo Asp Asp Asp Asp Asp Asp Argo Argo Argo Argo Argo Argo Argo Argo	tgg Trp ggc Gly ttc Phe 325 cgc Arg	Gly gca gag Glu 310 att Ile tat Tyr tgg Trp	gtg Val 295 gtc Val gta Val gcc Ala acc Thr	Trp 280 agc Ser ccc Pro gat Asp Lys 360 gta Val	gag Glu aag Lys ctg Leu tgg Arg	gag Glu gac Asp att Ile 330 ttc Phe Ctc Leu atg	aag Lys 315 acc Thr tgt Cys gtg Val	Gln J ctc J	Arg 285 ccc Pro gga Gly acg Thr ggg Gly gtc Val 365 gta Val	aac Asn ggc Gly gaa Glu 350 aag Lys	gto gto gto gga Gly 335 tca ser val	His ggg Gly ttt Phe 320 agc Ser Trp gtg Val	912 960 1008 1056 1104 1152
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga 115 As 116 118 gg 119 Gl 120 cc 123 Pr 124 126 cc 127 Pr 128 130 tc	a Leu c cac s His 290 t ggg s Gly 5 c ctg p Leu a cgc y Arg c cac o Glr c ac o Thr 370 c. tcc	Try 275 26 aca 36 Thi 37 Cct 37 Pro 38 Gly 48 Cct 37 Ser 37 Ser 38 Gly 48 Cct 37 Cct 38 Cct 3	Argo Argo Tyr gat CCa Pro 340 Cag Gln Cctc Leu	Ala tgg Trp ggc Gly ttc Phe 325 cgc Arg cp Arg	Gly gca gag Glu 310 att Tyr tgg Trp gcc Ala	gtg Val 295 gtc Val gta Val acc Thr ttg Leu 375 gtg	Trp 280 ago Ser CCC Pro gat Asp Ctc Leu aag Lys 360 gta Val	gag Glu aag Lys Leu tgg Trp 345 agg Arg	gag gac Glu gac Asp att Ile 330 ttc Phe ctc Leu atg	aag Lys 315 acc Thr tgt Cys gtg Val gcc Ala	Gln J ctc J	Arg 285 ccc Pro gga Gly acg Thr ggg Gly ytc Val 365 gta Val aac	aac Asn ggc Gly gaa Glu 350 aag Lys ggg	gto gto yal gga Gly 335 tca Ser yal	His ggg Gly ttt Phe 320 agc Ser Trp gtg Val gcc Ala	912 960 1008 1056 1104
104 106 tg 107 Cy 108 110 ca 111 Hi 112 30 114 ga 115 As 116 118 gg 119 Gl 120 cc 123 Pr 124 126 cc 127 Pr 128	a Let c cac c s His 290 t ggg s Gly 5 c ctop Let c cac go Glr c cac go Thr 370 c. tcc r Ser	Try 275 26 aca 36 Thi 37 Cct 37 Pro 38 Gly 48 Cct 37 Ser 37 Ser 38 Gly 48 Cct 37 Cct 38 Cct 3	Argo Argo Tyr gat CCa Pro 340 Cag Gln Cctc Leu	Ala tgg Trp ggc Gly ttc Phe 325 cgc Arg cp Arg	Gly gca gag Glu 310 att Tyr tgg Trp gcc Ala	gtg Val 295 gtc Val gta Val acc Thr ttg Leu 375 gtg	Trp 280 ago Ser CCC Pro gat Asp Ctc Leu aag Lys 360 gta Val	gag Glu aag Lys Leu tgg Trp 345 agg Arg	gag gac Glu gac Asp att Ile 330 ttc Phe ctc Leu atg	aag Lys 315 acc Thr tgt Cys gtg Val gcc Ala	Gln J ctc J	Arg 285 ccc Pro gga Gly acg Thr ggg Gly ytc Val 365 gta Val aac	aac Asn ggc Gly gaa Glu 350 aag Lys ggg	gto gto yal gga Gly 335 tca Ser yal	His ggg Gly ttt Phe 320 agc Ser Trp gtg Val gcc Ala	912 960 1008 1056 1104 1152

RAW SEQUENCE LISTING DATE: 07/05/2001 PATENT APPLICATION: US/09/647,965 TIME: 16:22:13

																gtg	1248
	Leu	Asp	Leu	Asp	_	Asp	GIn	Tyr	Lys		Tyr	Leu	Gln	Asp		Val	
136	~~~	~~~	2+~	~ a t	405	~~~	~~~		~~~	410	200	+ ~ ~			415		1284
		ggc Gly															1204
140	GIU	СТУ	мес	-	Pile	GIII	СТА	PIO	425	GIU	ser	•					
	Z21	0> SI	₽O TI	420	. ว				423								
		0/ 51 1> LI															
		2> T			. ,	ı											
					Home	o sar	oiens	S									
	<213> ORGANISM: <400> SEQUENCE:				- Du												
						Pro	Ara	Ile	Leu	Pro	Tro	Leu	Val	Ser	Gln	Leu	
150		1			5		5			10					15		
151	Asp	Leu	Gly	Gln	Leu	Glu	Gly	Val	Ala	Trp	Val	Asn	Lys	Ser	Arq	Thr	
152	-		-	20			•		25	-			-	30	,		
153	Arg	Phe	Arg	Ile	Pro	Trp	Lys	His	Gly	Leu	Arg	Gln	Asp	Ala	Gln	Gln	
154	_		35			_	-	40	-		-		45				
155	Glu	Asp	Phe	Gly	Ile	Phe	Gln	Ala	Trp	Ala	Glu	Ala	Thr	Gly	Ala	Tyr	·
156		50					55					60					
157	Val	Pro	Gly	Arg	Asp	Lys	Pro	Asp	Leu	Pro	Thr	Trp	Lys	Arg	Asn	Phe	
158	65					70					75					80	
159	Arg	Ser	Ala	Leu	Asn	Arg	Lys	Glu	Gly	Leu	Arg	Leu	Ala	Glu	Asp	Arg	
160					85					90					95		
	Ser	Lys	Asp	Pro	His	Asp	Pro	His	Lys	Ile	Tyr	Glu	Phe	Val	Asn	Ser	
162				100					105					110			
	Gly	Val		Asp	Phe	Ser	Gln		Asp	Thr	Ser	Pro		Thr	Asn	Gly	
164		- -	115		_			120				_	125		_	_	
	GTA		Ser	Thr	Ser	Asp		GIn	Glu	Asp	He		Asp	Glu	Leu	Leu	
166	01	130	34-1	**- 7	.		135					140		D	a	T	
		ASI	мет	val	Leu		PIO	Leu	Pro	ASP		GLY	Pro	Pro	ser		
168		Val	λΊο	Dro	Clu	150	Cva	Dro	Cln	Dro	155	7 ~~	Cor	Dro	Cor	160	
170	Ala	vai	ніа	PIO	165	PIO	Суѕ	PIO	GTII	170	ьeu	AIG	ser	Pro	175	цец	
	Asn	Δen	Pro	ሞክ r		Dho	Dro	Δen	T.011		Dro	Sor	Glu	Asn		T.011	
172	nsp.	71511	11.0	180	110	THE	110	N311	185	GLY	110	Ser	Giu	190	110	Dea	
	Lvs	Ara	Leu		Va 1	Pro	Glv	Glu		Trp	Glu	Phe	Glu	Val	Thr	Ala	
174	-1-		195		,		U -1	200	0_0		0		205				
	Phe	Tyr		Glv	Arg	Gln	Val		Gln	Gln	Thr	Ile		Cys	Pro	Glu	
176		210	. ,	1			215					220		- 4			
177	Gly		Arg	Leu	Val	Gly		Glu	Val	Gly	Asp		Thr	Leu	Pro	Gly	
178			•			230				_	235	_				240	
179	Trp	Pro	Val	Thr	Leu	Pro	Asp	Pro	Gly	Met	Ser	Leu	Thr	Asp	Arg	Gly	
180					245					250					255	_	
181	Val	Met	Ser	Tyr	Val	Arg	His	Val	Leu	Ser	Cys	Leu	Gly	Gly	Gly	Leu	
182				260					265					270			
	Ala	Leu		Arg	Ala	Gly	Gln		Leu	${\tt Trp}$	Ala	Gln	Arg	Leu	Gly	His	
184			275					280					285			•	
	Cys		Thr	\mathtt{Tyr}	\mathtt{Trp}	Ala		Ser	Glu	Glu	Leu		Pro	Asn	Ser	Gly	
186		290					295					300					

RAW SEQUENCE LISTINGPATENT APPLICATION: US/09/647,965

DATE: 07/05/2001

TIME: 16:22:13

```
187 His Gly Pro Asp Gly Glu Val Pro Lys Asp Lys Glu Gly Gly Val Phe
188 305
                        310
                                             315
189 Asp Leu Gly Pro Phe Ile Val Asp Leu Ile Thr Phe Thr Glu Gly Ser
                                        330
191 Gly Arg Ser Pro Arg Tyr Ala Leu Trp Phe Cys Val Gly Glu Ser Trp
                                    345
193 Pro Gln Asp Gln Pro Trp Thr Lys Arg Leu Val Met Val Lys Val Val
     355
                                360
195 Pro Thr Cys Leu Arg Ala Leu Val Glu Met Ala Arg Val Gly Gly Ala
                            375
197 Ser Ser Leu Glu Asn Thr Val Asp Leu His Ile Asp Asn Asp His Pro
                       390
                                            395
199 Leu Asp Leu Asp Asp Asp Gln Tyr Lys Ala Tyr Leu Gln Asp Leu Val
                  405
201 Glu Gly Met Asp Phe Gln Gly Pro Gly Glu Ser
                420
205 <210> SEQ ID NO: 3
206 <211> LENGTH: 13
207 <212> TYPE: PRT
208 <213> ORGANISM: Homo sapiens
210 <400> SEQUENCE: 3
211 Ile Ser Asn Ser His Pro Leu Ser Leu Thr Ser Asp Gln
212 1
215 <210> SEQ ID NO: 4
216 <211> LENGTH: 4
217 <212> TYPE: PRT
218 <213> ORGANISM: Homo sapiens
220 <400> SEQUENCE: 4
221 Gly Ala Ala Ala
222 1
225 <210> SEQ ID NO: 5
226 <211> LENGTH: 6
227 <212> TYPE: PRT
228 <213> ORGANISM: Homo sapiens
230 <400> SEQUENCE: 5
231 Gly Ala Ala Ala Asn Asn
235 <210> SEQ ID NO: 6
236 <211> LENGTH: 15
237 <212> TYPE: DNA
238 <213> ORGANISM: Homo sapiens
240 <400> SEQUENCE: 6
241 ggaaaactga aaggg
                                                                       15
243 <210> SEQ ID NO: 7
244 <211> LENGTH: 30
245 <212> TYPE: DNA
246 <213> ORGANISM: Homo sapiens
248 <400> SEQUENCE: 7
249 gatcgggaaa gggaaaccga aactgaagcc
                                                                       30
```

RAW SEQUENCE LISTING DATE: 07/05/2001 PATENT APPLICATION: US/09/647,965 TIME: 16:22:13

	<21																
		<211> LENGTH: 1512															
		<212> TYPE: DNA															
		<213> ORGANISM: Homo sapiens															
	<220> FEATURE: <221> NAME/KEY: CDS																
			-														
					(1)(1512)												
	<40					в cct gag agg gca gcc cca cgc gtg ctg ttc gga ga											4.0
	_	-	-	-				-	-		-		_				48
		Ala	ьeu	Ата		GIU	Arg	Ата	Ата		Arg	vaı	Leu	Phe	_	GIU	
263	1	a+ a	a++	~~-	5	- t- a			~~~	10	.			a+ a	15	+~~	0.6
														ctg			96
267	115	ьеu	neu	20	GIU	116	ser	ser	25	Cys	ıyı	GIU	СТУ	Leu 30	GIII	тъ	
	ata	·a a a	a a a		000	200	+ ~+	++0		a+ a	000	+ ~ ~	224	cac	++0	aca	144
														His			744
271	neu	кър	35	нта	ALG	1111	Cys	40	ALY	val	PIO	тър	45	urs	Pile	АТа	
	cac	ааσ		cta	a a c	пап	acc		ασα	cac	ato	ttc		gcc	taa	act	192
														Ala			
275	9	50	"DP	Deu	501	Olu	55	1151	mu	211.9	110	60	L ₁ 5	niu	1-5	mu	
	at.a	-	CGC	aac	аσσ	taá		cct	age	aσc	аσσ		aat	ggc	cca	ccc	240
														Gly			210
279	65		9	011	5	70			001	001	75	01.1	O+1			80	
		σασ	act	σασ	act		σασ	cac	acc	aac		aaa	acc	aac	ttc		288
														Asn			
283					85			5		90		-1-			95	5	
285	tgc	qca	ctq	cqc	agc	acq	cqt	cqc	ttc	qtq	atg	ctq	cqq	gat	aac	tcq	336
														Āsp			
287	_			100			-	_	105				_	110			
289	ggg	gac	ccg	gcc	gac	ccg	cac	aag	gtg	tac	gcg	ctc	agc	cgg	gag	ctg	384
														Arg			
291			115					120					125				
293	tgc	tgg	cgá	gaa	ggc	ccá	ggc	acg	gac	cag	act	gag	gca	gag	gcc	ccc	432
294	Cys	Trp	Arg	Glu	Gly	Pro	Gly	Thr	Asp	Gln	Thr	Glu	Ala	Glu	Ala	Pro	
295		130					135					140					
														ttc			480
		Ala	Val	Pro	Pro	Pro	Gln	Gly	Gly	Pro	Pro	Gly	Pro	Phe	Leu	Ala	
	145					150					155					160	
301	cac	aca	cat	gct	gga	ctc	caa	gcc	cca	ggc	ccc	ctc	cct	gcc	cca	gct	528
	His	Thr	His	Ala		Leu	Gln	Ala	Pro		Pro	Leu	Pro	Ala		Ala	
303					165					170					175		
														agc			576
	Gly	Asp	Lys		Asp	Leu	Leu	Leu		Ala	Val	Gln	Gln	Ser	Cys	Leu	
307				180					185					190			
														gtc			624
	Ala	Asp		Leu	Leu	Thr	Ala		Trp	GLY	Ąlа	Asp		Val	Pro	Thr	
311			195					200					205				<i>-</i>
														ggg			672
314	гÀ2	АТа	Pro	GTA	GLu	GTA	GIn	GLu	GLY	ьeu	Pro	ьeu	Thr	Gly	АТа	Cys	

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/647,965

DATE: 07/05/2001

TIME: 16:22:14

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF3\07032001\1647965.raw

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date